

PRELIMINARY OBSERVATIONS WITH REGARD TO  
"AN EVALUATION AND CRITIQUE OF THE REPORT  
LINKING CIGARETTE SMOKING TO GENERAL MOR-  
BIDITY AND DISABILITY" BY PROFESSOR  
THEODOR STERLING

The "Evaluation" appears to be quite beneficial and will provide a basis of attack on the "Cigarette Smoking and Health Characteristics" publication issued by the Public Health Service and the rather exaggerated claims based upon the data therein contained. It would appear as though Professor Sterling did a very thorough and workmanlike job in the preparation of his "Evaluation", and his reasoning and approaches to the various problems would seem to be sound. He has, in many instances, been able to demonstrate by apparently reliable studies by the same agencies which conducted the survey upon which "Cigarette Smoking and Health Characteristics" was based to show the variances and probable errors in the survey and information obtained as a result. Since such large variability and error in the measuring tool (the household interview survey) have been previously demonstrated, relatively small differences between the two groups (smokers and nonsmokers) become demonstratively meaningless. Further, use of proxy responses is a highly questionable and inaccurate method of obtaining information of the type and nature involved in the study.

The conclusions reached by Professor Sterling appear to be valid, but could be strengthened to more forcibly and clearly state the author's position.

The following reflect some preliminary observations made as a result of the study of the "Evaluation".

I. INTRODUCTION

Professor Sterling has made a fairly good approach in this section to give the reader a general picture of the discussion to follow. He has been careful to declare that the National Health Survey, which has been a continuing study since 1957, has many good and beneficial aspects. The survey was, however, intended to define the consequences of illness among

the noninstitutionalized population of the United States. He points out that the study was not designed to fulfill the requirements to test hypotheses concerning the causal effects of certain factors on disease.

At page 4 and again at page 7, Professor Sterling mentions that the individuals who would be at home to be interviewed during the day, when the interviewer would call, would normally be nonworking members of the household, usually the housekeeper, who was the wife or mother, or by older or retired nonworking household members. He does not mention that "teenagers" were also likely to be home during the daytime and to provide information to the survey interviewer.

## II. VALIDITY OF THE SURVEY INSTRUMENT

Page 14, fifth line, "Cigarette Smoking and Health Characteristics" should have the first letters capitalized and the entire matter placed in quotes.

Page 16, third line in the second paragraph should read "valid data on morbidity."

Page 17, the last paragraph in regard to proxy responses and persons who are in the last year of life is not clearly stated.

## III. THE RELATION BETWEEN CIGARETTE SMOKING AND DISABILITY

As is true elsewhere in the report, his major sub-headings should be underlined to give uniformity to the paper.

Page 51. In discussing Table 15 with reference to comparison between the age distribution of the population obtained in the sample and the number expected based upon latest United States Census figures, Professor Sterling said it is obvious that the two distributions are the same. This is not entirely correct. The percentages on Table 15 are very close, but they are not truly the same. Possibly this would have no meaning to a statistician, but to a lay reader it might be another situation.

Page 51. The explanation for age adjustment is still not very clear. In the fifth full paragraph on page 51, there is contained the statement, "We saw indeed that this was the case." It is not clear just where this was shown to be the case.

Page 54. The last sentence in the second full paragraph on the page reads, "A convincing case is not made therefore for the claim that smokers and non-smokers show a large difference in the incidence of some chronic diseases." This is a very weak statement and should be pointed up.

Page 55. The figures revealed on Table 17 show a complete reversal for unadjusted age for all chronic conditions as compared with adjusted age for all chronic conditions. This is carried on again at page 56 in Table 18. The peculiarities should be emphasized more than they have been to indicate the distortion due to "age adjustment". Further, age adjustment is a most difficult area to explain to a lay reader. Possibly additional information in this regard could be included to assist the reader.

Page 66. In the sixth line of the first paragraph, the word "incidents" probably should be "incidence".

Page 66. The sentence "The hypothesis that the two populations, that of smokers or non-smokers, are independent samples from a population which has a common incidence of morbidity and disability cannot be rejected from these data." This is a rather backward or backdoor manner of stating an affirmative. It is not too sure that it would be understood.

The entire conclusion is rather weak and should be strengthened and "beefed up" to give it more emphasis.